

A new record for *Leptomitus* from Alaska

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The purpose of this paper is to report an extension of the geographic range of *Leptomitus lacteus* (Roth) Agardh. to Alaska and to describe its habitat in this region of the world.

During July 1931 masses of a fibrous, grayish and slimy substance were collected around placer mining operations along Goldstream Creek near Fox, Alaska (64°55' north latitude, 148°41' west longitude). This material was identified as *Leptomitus lacteus*. Later this identification was verified by Dr. Arthur Kevorkian and Professor W. C. Coker. More recently Dr. Kevorkian has studied the zoospore formation in this Alaskan material. The results of his investigations will appear shortly under the title of *Studies in the Leptomitaceae*.

This occurrence of *Leptomitus lacteus* within one hundred miles of the Arctic Circle is a new location which is considerably farther north than any of the previously reported cases. It has been collected many times throughout Europe and North America, yet no northern location has been recorded which is comparable to this record from Alaska. As examples of its northern distribution in North America there are the records of Humphrey (1893) from Massachusetts and Connecticut and those of Kevorkian (unpublished) from Massachusetts and Rhode Island. In Europe it has been collected in many places; the records of Corny (1872) and Radais (1898) from France, Kolkwitz (1903), Tiegs (1919) and Amelung (1931) from Germany, and Petersen (1911) are cited as examples of its distribution there. The records from Denmark appear to be the most northern of those found in the literature but even these are in a general latitude about ten degrees south of the Alaskan location.

Leptomitus lacteus is one of the Leptomitales which are commonly referred to as water moulds. In general the fungi of this order are more or less abundant in all fresh waters, preferring waters which are clear and relatively pure. *Leptomitus lacteus*, however differs rather strikingly from the other members of its group in preferring a habitat containing large amounts of organic substances such as the slime from sewers or in sewage-contaminated streams. It has also been reported from drains of

breweries, sugar factories, paper mills, etc. Coker (1923) in North Carolina reports that, "we have found the plant in Chapel Hill not only in sewers but also rarely in such clean streams as Battles' brook and the brook behind the athletic field." Kevorkian (unpublished) on one occasion has collected this form in clean streams in Arlington, Massachusetts.

The conditions under which *Leptomitus* was found along Goldstream Creek, Alaska appear to agree generally with the majority of the previously reported cases. Although the water contained no sewage or similar materials, organic substances of another type were present in large quantities. It is in the floors of the valleys of Central Alaska that the topsoil consists of muck (peat) varying from a few feet to over one hundred feet in thickness. The collection of *Leptomitus* reported above was made in water containing large amount of suspended muck, and presumably there were sufficient organic substances present in solution to allow the plant to grow and develop.

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